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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,902	08/28/2006	Takashi Akaba	062790	4368

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EXAMINER	
NGUYEN, HUNG D	

ART UNIT	PAPER NUMBER
3742	

MAIL DATE	DELIVERY MODE
04/28/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/590,902	AKABA ET AL.	
	Examiner	Art Unit	
	HUNG NGUYEN	3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 August 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 August 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/28/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Novak et al (US Pat. 4,841,124) in view of Wegener (US Pat. 6,601,426).

3. Regarding claim 1, Novak et al. discloses an apparatus for improve residual stress of piping (Col. 1, Lines 11-14), the T-piping comprising a first piping 12 (Fig. 1) having one end welded and connected to a tubular circumferential surface of a second piping 13 (Fig. 1); and characterized by a circumferential-direction position adjusting structure for moving the weld head 42 (Fig. 2) along a circumferential direction about a tubular axis of the first piping 12 (Fig. 1; along the track 16), except for the irradiates an outer surface of a T-piping with a laser beam emitted from a laser head. Wegener teaches a laser stretch-forming processing apparatus for sheet metal where the laser emitter 28 (Fig. 1) serves as the welding head (Par. 3, Lines 33-38). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize in Kramer the teaching of Wegener in order to have an apparatus for improving residual stress of piping, which irradiates an outer surface of a T-piping with a laser beam emitted from a laser head, for the purpose of preventing stress-corrosion-cracking at the T-piping connection.

4. Regarding claim 2, Novak et al. discloses An apparatus for improving residual stress of piping, the T-piping comprising a first piping 12 (Fig. 1) having one end welded and connected to a tubular circumferential surface of a second piping 13 (Fig. 1), and comprising: a circumferential-direction position adjusting structure for moving the laser head along a circumferential direction about a tubular axis of the first piping 12 (Fig. 1; along the track 16); a tubular axial-direction position adjusting structure for moving the laser head along a tubular axial direction of the first piping (Direction 98, Fig. 3); a tubular axial-direction position adjusting structure for moving the laser head along a tubular axial direction of the first piping (Direction 94 and 96, Fig. 3) except for the irradiates an outer surface of a T-piping with a laser beam emitted from a laser head and an emission-direction adjusting structure for changing an emission direction of the laser beam in a plane including the tubular axis of the first piping, by changing a direction of the laser head. Wegener teaches a laser stretch-forming processing apparatus for sheet metal where the laser emitter 28 (Fig. 1) serves as the welding head (Par. 3, Lines 33-38) and the laser head can rotate around axis 54 (Fig. 3; Col. 6, Lines 55-64). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize in Kramer the teaching of Wegener in order to have an apparatus for improving residual stress of piping, which irradiates an outer surface of a T-piping with a laser beam emitted from a laser head and an emission-direction adjusting structure for changing an emission direction of the laser beam in a plane including the tubular axis of the first piping, by changing a direction of the laser head, for

the purpose of preventing stress-corrosion-cracking at the T-piping connection and improving the welding seam by irradiates a laser beam at all angles.

5. Regarding claim 3, Novak et al. discloses An apparatus for improving residual stress of piping, the T-piping comprising a first piping 12 (Fig. 1) having one end welded and connected to a tubular circumferential surface of a second piping 13 (Fig. 1), and comprising: a circumferential-direction position adjusting structure for moving the laser head along a circumferential direction about a tubular axis of the first piping 12 (Fig. 1; along the track 16); a tubular axial-direction position adjusting structure for moving the laser head along a tubular axial direction of the first piping (Direction 98, Fig. 3); a tubular axial-direction position adjusting structure for moving the laser head along a tubular axial direction of the first piping (Direction 94 and 96, Fig. 3) except for the irradiates an outer surface of a T-piping with a laser beam emitted from a laser head; a first emission-direction adjusting structure for changing an emission direction of the laser beam in a plane including the tubular axis of the first piping, by changing a direction of the laser head and a second emission-direction adjusting structure for changing the emission direction of the laser beam in a plane intersecting the plane including the tubular axis of the first piping, by changing the direction of the laser head. Wegener teaches a laser stretch-forming processing apparatus for sheet metal where the laser emitter 28 (Fig. 1) serves as the welding head (Par. 3, Lines 33-38) and the laser head can rotate around axis 54 and 54a(Fig. 3; Col. 6, Lines 55-64). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize in Kramer the teaching of Wegener in order to have an apparatus for

improving residual stress of piping, which irradiates an outer surface of a T-piping with a laser beam emitted from a laser head; a first emission-direction adjusting structure for changing an emission direction of the laser beam in a plane including the tubular axis of the first piping, by changing a direction of the laser head and a second emission-direction adjusting structure for changing the emission direction of the laser beam in a plane intersecting the plane including the tubular axis of the first piping, by changing the direction of the laser head, for the purpose of preventing stress-corrosion-cracking at the T-piping connection and improving the welding seam by irradiates a laser beam at all angles.

6. Regarding claim 4, Novak et al. discloses the weld head is provided in a weld head support portion so as to be moved in an oscillatory manner (Col. 2, Lines 34-38; Col. 4, Lines 7-19) except for the weld head is laser. Wegener teaches a laser stretch-forming processing apparatus for sheet metal where the laser emitter 28 (Fig. 1) serves as the welding head (Par. 3, Lines 33-38). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize in Kramer the teaching of Wegener in order to have the laser head is provided in a laser head support portion so as to be moved in an oscillatory manner, for the purpose of preventing stress-corrosion-cracking at the T-piping connection.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Novak et al (US Pat. 4,841,124) in view of Wegener (US Pat. 6,601,426) in view of Schadler (US Pat. 6,825,438).

8. Regarding claim 5, the combine references disclose all the claimed features except for the plurality of the laser heads are provided in a laser head support portion. Schadler teaches a multi-head lasers cutting/welding cell with vibration control where a multi-head laser is mounted on the support (Abstract and Fig. 1). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize in the combined references the teaching of Schadler in order to have the plurality of the laser heads are provided in a laser head support portion, for the purpose of welding multi-parts at one welding station.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUNG NGUYEN whose telephone number is (571)270-7828. The examiner can normally be reached on Monday-Friday, 8:30AM-6PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on (571)272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/HUNG NGUYEN/
Examiner, Art Unit 3742

/TU B HOANG/

Supervisory Patent Examiner, Art Unit 3742